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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,350	01/18/2006	Jurgen Berbner	BERBNER ET AL -I (PCT)	7151
25889	7590	10/04/2007	EXAMINER	
WILLIAM COLLARD COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			PHILLIPS, FORREST M	
			ART UNIT	PAPER NUMBER
			2837	
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			10/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,350

Applicant(s)

BERBNER ET AL.

Examiner

Forrest M. Phillips

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 21-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/18/05</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the stitch wales and/or stitch rows of varying width must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-26, 28 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over ^{Pirchl} ~~Pirchil~~ (US5996730) in view of Stricker (US5681072) and Pall (US3783969).

With respect to claim 21 ^{Pirchl} ~~Pirchill~~ discloses a sound proof thermal shield, particularly for motor vehicles, comprising a support (3 in figure 1) made from aluminum (Column 2 lines 54-69), at least one noise absorbing layer (54 in figure 1 and a ^{thermal} ~~thermal~~ covering (2 in figure 1) made from aluminum.

^{Pirchl} ~~Pirchill~~ does not disclose wherein the at least one noise-absorbing layer is created from multiple plies of knitted aluminum fabric wherein at least 5 superimposed plies of knitted aluminum fabric are compressed to create a permeable mat in such manner that the mat has a thickness in the range from 0.5 to 3 mm and a microporous structure with a plurality of narrow, branched channels, wherein the support has a free side with a plurality of noise pass-through apertures the diameter of which is in the range from 0.1 to 1.9 mm, up to 24 noise pass-through apertures per cm² being arranged thereon.

Stricker discloses a sound-absorbing member for the exterior of a motor vehicle (~~not~~ illustrated in figure 1, but specific attention will be drawn to embodiment of figure 6),

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comprising a support (618 in figure 6, see also 3 in figure 1), at least one noise-absorbing layer (25 in figure 6) and a covering (4 in figure 1, 619 in figure 6), wherein the support has a free side (toward the noise source) with a plurality of noise pass through apertures (622 in figure 6) the diameter of which is in the range from 0.1 to 1.9 mm (Column 1 line 23).

While Stricker does not disclose expressly that there are up to 24 noise pass through holes per square centimeter, it would have been obvious to one of ordinary skill in the art to select such an arrangement of apertures, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Stricker to have the support and the mat so arranged with the soundproof thermal shield of ^{Pirchl}Prehill to "provide a sound absorber which can be constructed in a dirt insensitive manner and which is therefore also useable in the outer areas of motor vehicles and which permits a good absorption in a wide frequency range."

^{Pirchl}
~~Prehill~~, as modified, does not disclose wherein the at least one noise-absorbing layer is created from multiple plies of knitted aluminium fabric wherein at least 5 superimposed plies of knitted aluminium fabric are compressed to create a permeable mat in such manner that the mat has a thickness in the range from 0.5 to 3 mm and a microporous structure with a plurality of narrow, branched channels.

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Pall discloses an acoustic insulation, which comprises multiple plies of knitted aluminum fabric (see all figure, Column 7 lines 45-60) wherein at least 5 superimposed plies of knitted aluminum fabric are compressed to create a permeable mat (Column 3 line 60- Column 4 line 2) in such a manner that the mat has a thickness in the range of 0.5 to 3mm (Col 4 lines 15-20) and a microporous structure with a plurality of narrow branched channels (refer to figure 5).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Pall to have a multi layer knit aluminum mat as a damping material with the sound proof thermal shield of ^{Pichl}~~Pichl~~ as modified, to provide a high heat resistant material which is eminently suited as an acoustic absorber (Column 3 lines 40-60).

With respect to claims 22 and 23 while ^{Pichl}~~Pichl~~ as modified, does not disclose wherein the mat has a weight per unit area in the range of 8 to 15 g/dm², nor the specified flow resistance. it would have been obvious to one of ordinary skill in the art to select such a density and flow resistance, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

With respect to claim 24 Pall further discloses wherein the knitted aluminum fabric is in the form of a single thread knitted fabric (see figure 5 and Column 8 lines 5-10).

With respect to claim 25 Pall further discloses wherein the knitted aluminum fabric is constructed such that the average distance between two consecutive stitch

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wales is greater than the average distance between the two legs of a stitch (refer to figure 5).

With respect to claim 26 While not expressly discloses it would have been obvious to one of ordinary skill to have varying widths of stitch from row to row or wale to wale as this would provide a greater degree of anisotropy which is desired by the teachings of Pall.

With respect to claim 27 Stricker discloses wherein the support has a thickness of 0.5 to 0.8 mm (Column line 66- Column 3 line 2).

With respect to claim 28 ^{Pirchl}~~Pirchill~~ further discloses wherein the thermal covering is made from aluminum foil (Column 3 lines 15-23).

With respect to claim 30 ^{Pirchl}~~Pirchill~~ further discloses wherein the support and the thermal covering are profiled (refer to figure 1).

With respect to claim 31 ^{Pirchl}~~Pirchill~~ further discloses wherein the support has an essentially flat surface (refer to figure 1, described as being a plate or foil).

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over ^{Pirchl}~~Pirchill~~ in view of Stricker and Pall as applied to claim 21 above, and further in view of Mueller et al (Us5196253).

With respect to claim 29 ^{Pirchl}~~Pirchill~~ as modified discloses the invention as claimed except wherein the thermal covering is microperforated.

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Mueller discloses a sound absorbing heat shield with a microperforated covering to the insulation of aluminum foil which is known to act as a thermal covering (see abstract, and Column 2 lines 30-45).

Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pirchil in view of Stricker and Pall as applied to claim 21 above, and further in view of Zaima et al (US5134014) and Frederick et al. (US5866235).

With respect to claims 32-34 Pirchil, as modified, discloses the invention as claimed except wherein a spacer is arranged between the support and the noise absorption layer and/or between the noise absorption layer and the thermal covering, and between two or more noise absorption layers.

Zaima discloses the use of a corrugated metal foil in a composite sound and heat insulating member (abstract and figure 1).

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Zaima to use a corrugated metal foil in a sound and heat insulating panel with the soundproof thermal heat shield of Pirchil, as modified.

The motivation for doing so would be to allow for flexibility and cavities to insulate in between the various layers of the heat shield.

While not explicitly shown to be aluminum, it would have been obvious to select Aluminum as the material given the use of a single material is useful of recyclability as shown by Fredreick (abstract).

Regarding claim 33 While ^{Pirchil}~~Pirchil~~ does not disclose expressly the use of multiple layers of sound absorption mats it would have been obvious to one of ordinary skill in the

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art to incorporate such an arrangement given that it is known to increase sound absorption with more layers and further it has been held mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to form 892.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Forrest M. Phillips whose telephone number is 5712729020. The examiner can normally be reached on Monday through Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 5712721988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FP


LINCOLN DONOVAN
SUPERVISORY PATENT EXAMINER